

# MIL-DTL-83513/28 Thru /33 Micro-D Connectors Straight PCB Connectors (CBS)



**Space-Saving** — These connectors take up less room on the PC board. PC tail spacing is .075 inch (1.9mm), compared to .100 inch (2.54mm.).

**Threaded Inserts** — Stainless steel inserts are insert molded into plastic trays. These inserts provide a ground path from the PC board to the mating cable.

**Solder-Dipped** — Terminals are coated with SN63/Pb37 tin-lead solder for best solderability.

## HOW TO ORDER M83513/22 THRU /27 STRAIGHT PCB CONNECGTORS

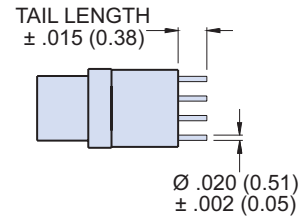
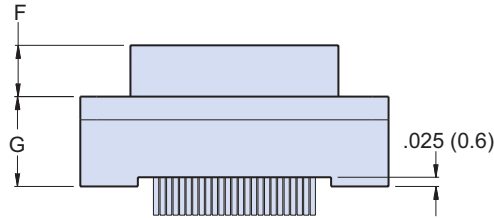
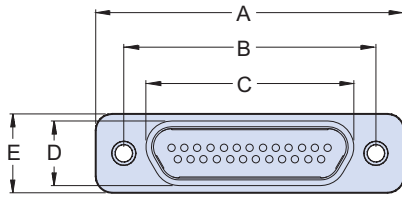
Spec Number	Slash Number- Shell Size	PC Tail Length	Shell Finish	Hardware Option
<b>M83513</b>	<b>Plug (Pin Contacts)</b>		<b>01</b> – .109 Inch (2.77 mm) <b>02</b> – .140 Inch (3.56 mm) <b>03</b> – .172 Inch (4.37 mm)	<b>C</b> – Cadmium <b>N</b> – Electroless Nickel <b>P</b> – Passivated SST  <b>N</b> – No Jackpost <b>P</b> – Jackposts Installed <b>T</b> – Threaded Insert in Board Mount Hole (No Jackposts) <b>W</b> – Threaded Insert in Board Mount Hole and jackposts Installed  (See "Hardware Options" below for Illustrations)  Shell sizes A (9) through G (51) are #2-56 UNC-2 threads.  Shell size H (100) is #4-40 UNC-2 threads.
	<b>28-A</b> - 9 Contacts	PC Tail Length ± .015 (0.38)		
	<b>28-B</b> - 15 Contacts			
	<b>28-C</b> - 21 Contacts			
	<b>28-D</b> - 25 Contacts			
	<b>28-E</b> - 31 Contacts			
	<b>28-F</b> - 37 Contacts			
	<b>29-G</b> - 51 Contacts			
	<b>30-H</b> - 100 Contacts			
	<b>Receptacle (Socket Contacts)</b>			
	<b>31-A</b> - 9 Contacts			
	<b>31-B</b> - 15 Contacts			
	<b>31-C</b> - 21 Contacts			
	<b>31-D</b> - 25 Contacts			
	<b>31-E</b> - 31 Contacts			
	<b>31-F</b> - 37 Contacts			
<b>32-G</b> - 51 Contacts				
<b>33-H</b> - 100 Contacts				
<b>Sample Part Number</b>				
<b>M83513/</b>	<b>33-H</b>	<b>01</b>	<b>C</b>	<b>P</b>

## HARDWARE OPTIONS

N	P	T	W
<b>No Jackpost</b>	<b>Jackpost</b>	<b>Threaded Insert</b>	<b>Jackpost, Threaded Insert</b>



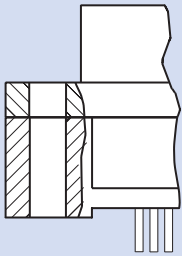
# MIL-DTL-83513/28 Thru /33 Micro-D Connectors Straight PCB Connectors (CBS)



## M83513/28 THRU 33 HARDWARE OPTIONS

### HARDWARE OPTION N

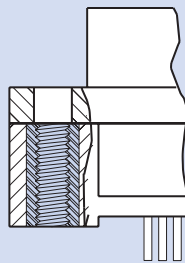
NO JACKPOST, NO  
THREADED INSERT



**MTNG HOLE DIA.**  
9-51 CONTACTS  
.096/.088 (2.44/2.24)  
100 CONTACTS  
.128/.122 (3.25/3.10)

### HARDWARE OPTION T

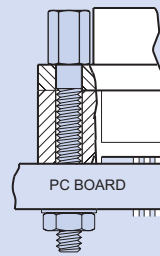
THREADED INSERT, NO  
POST



**THREAD SIZE**  
9-51 CONTACTS # 2-56 UNC-2B  
100 CONTACTS # 4-40 UNC-2B

### HARDWARE OPTION P

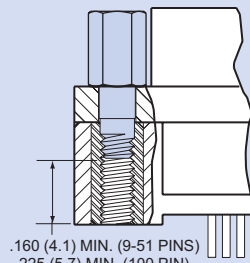
JACKPOST AND THRU-HOLE



**THREAD SIZE**  
9-51 CONTACTS # 2-56 UNC  
100 CONTACTS # 4-40 UNC  
**USE WITH .156 3.96) MAX. PC  
BOARD THICKNESS**

### HARDWARE OPTION W

JACKPOST AND THREADED  
INSERT



.160 (4.1) MIN. (9-51 PINS)  
.225 (5.7) MIN. (100 PIN)

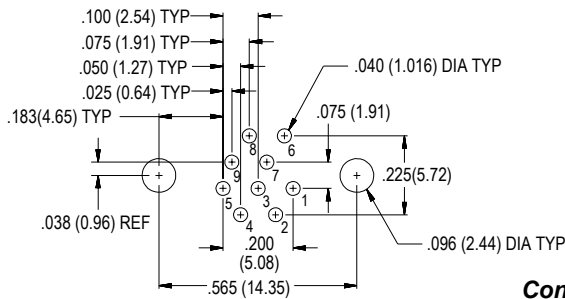
**THREAD SIZE**  
9-51 CONTACTS #2-56 UNC  
100 CONTACTS #4-40 UNC

## DIMENSIONS

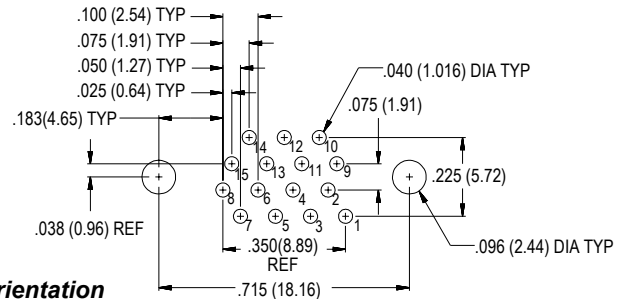
Layout	A Max.		B		C Max.		D Max.		E Max.		F		G Max.	
	In.	mm.	In. ±.005	mm. ±0.13	In.	mm.	In.	mm.	In.	mm.	In. ±.003	mm. ±0.08	In.	mm.
9P	.785	19.94	.565	14.35	.333	8.46	.185	4.70	.310	7.87	.183	4.65	.355	9.02
9S	.785	19.94	.565	14.35	.400	10.16	.253	6.43	.310	7.87	.195	4.95	.355	9.02
15P	.935	23.75	.715	18.16	.483	12.27	.185	4.70	.310	7.87	.183	4.65	.355	9.02
15S	.935	23.75	.715	18.16	.551	14.00	.253	6.43	.310	7.87	.195	4.95	.355	9.02
21P	1.085	27.56	.865	21.97	.633	16.08	.185	4.70	.310	7.87	.183	4.65	.355	9.02
21S	1.085	27.56	.865	21.97	.701	17.81	.253	6.43	.310	7.87	.195	4.95	.355	9.02
25P	1.185	30.01	.965	24.51	.733	18.62	.185	4.70	.310	7.87	.183	4.65	.355	9.02
25S	1.185	30.01	.965	24.51	.801	20.35	.253	6.43	.310	7.87	.195	4.95	.355	9.02
31P	1.335	33.91	1.115	28.32	.883	22.43	.185	4.70	.310	7.87	.183	4.65	.355	9.02
31S	1.335	33.91	1.115	28.32	.951	24.16	.253	6.43	.310	7.87	.195	4.95	.355	9.02
37P	1.485	37.72	1.265	32.13	1.033	26.24	.185	4.70	.310	7.87	.183	4.65	.355	9.02
37S	1.485	37.72	1.265	32.13	1.101	27.96	.253	6.43	.310	7.87	.195	4.95	.355	9.02
51P	1.435	36.45	1.215	30.86	.983	24.97	.228	5.79	.400	10.16	.183	4.65	.355	9.02
51S	1.435	36.45	1.215	30.86	1.051	26.70	.296	7.52	.400	10.16	.195	4.95	.355	9.02
100P	2.170	55.12	1.800	45.72	1.383	35.13	.271	6.88	.510	12.95	.183	4.65	.430	10.92
100S	2.170	55.12	1.800	45.72	1.451	36.86	.340	8.64	.510	12.95	.195	4.95	.430	10.92

Patterns shown are for connector mounting side of PC board.

## M83513/28 THRU 30 PCB LAYOUTS – PIN CONNECTORS

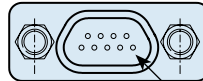


9 PIN M83513/28-A

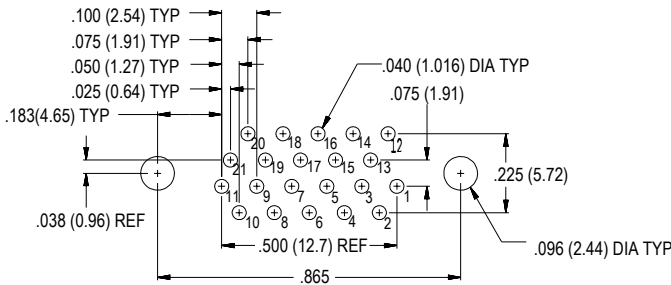


15 PIN M83513/28-B

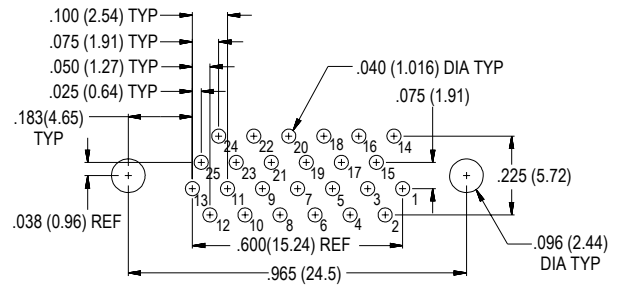
Connector Orientation



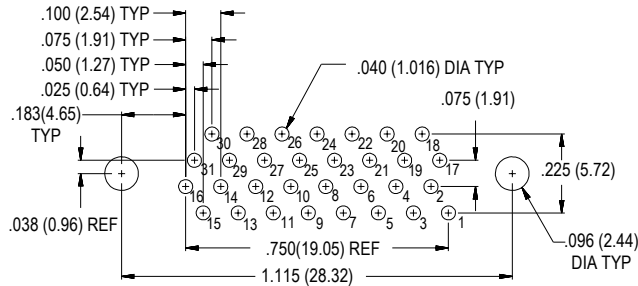
Pin #1



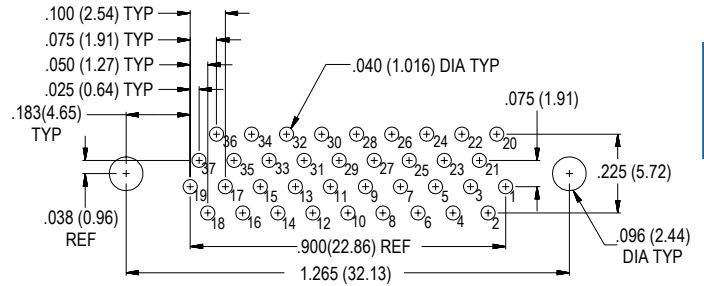
21 PIN M83513/28-C



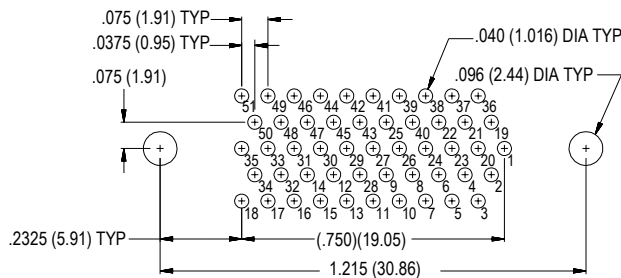
25 PIN M83513/28-D



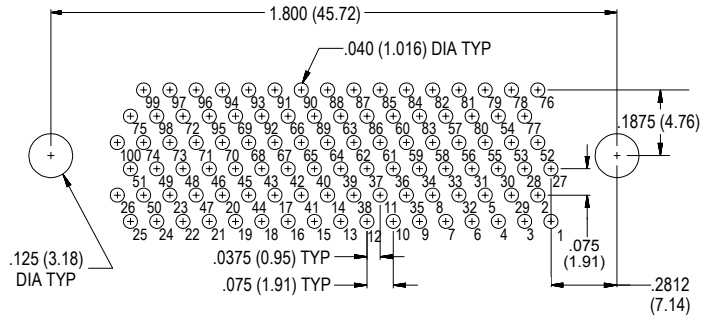
31 PIN M83513/28-E



37 PIN M83513/28-F



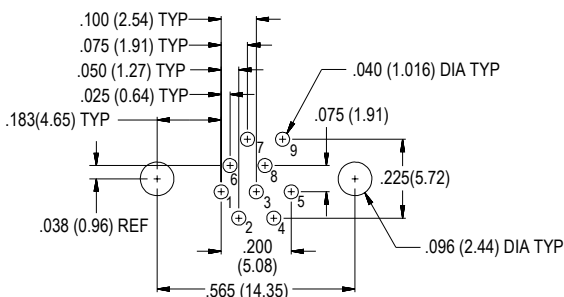
51 PIN M83513/29-G



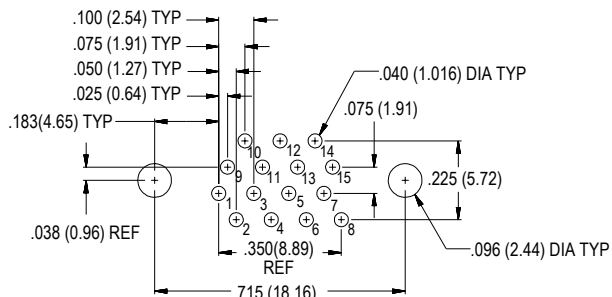
100 PIN M83513/30-H

Patterns shown are for connector mounting side of PC board.

## MM83513/31 THRU /33 PCB LAYOUTS – SOCKET CONNECTORS

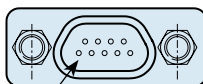


**9 Socket M83513/31-A**

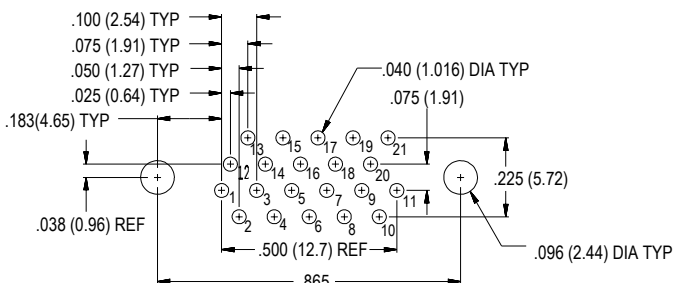


**15 Socket M83513/31-B**

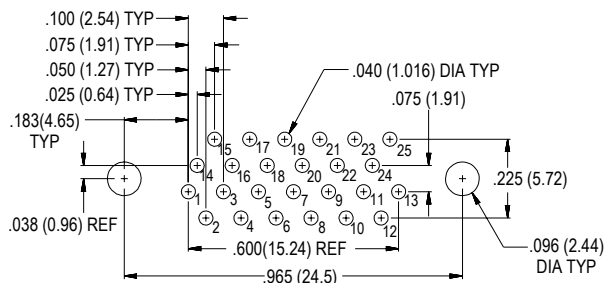
**Connector Orientation**



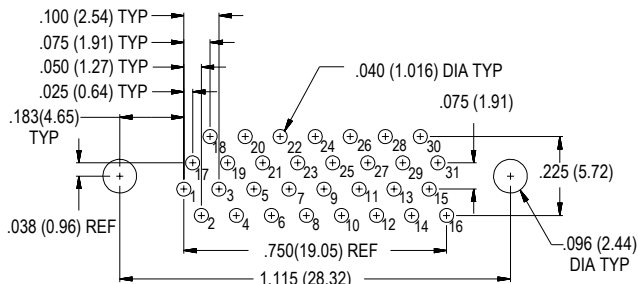
Socket #1



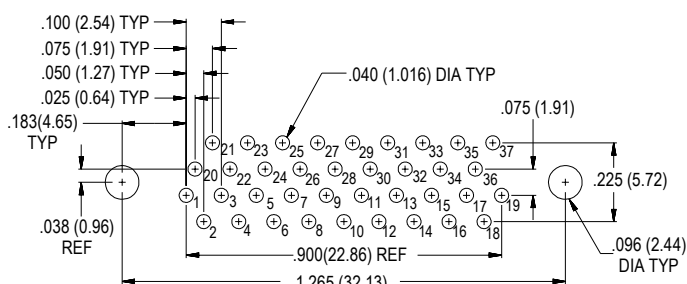
**21 Socket M83513/31-C**



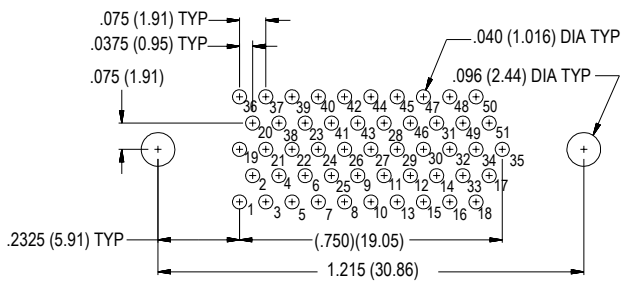
**25 Socket M83513/31-D**



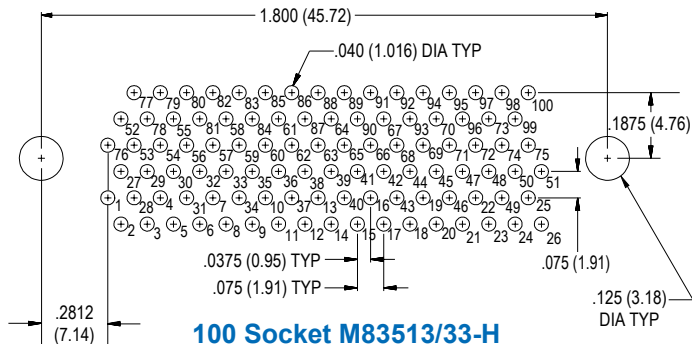
**31 Socket M83513/31-E**



**37 Socket M83513/31-F**



**51 Socket M83513/32-G**



**100 Socket M83513/33-H**